537,455

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 29 July 2004 (29.07.2004)

PCT

(10) International Publication Number WO 2004/063712 A2

(51) International Patent Classification7:

G01N

(21) International Application Number:

PCT/US2004/000447

(22) International Filing Date: 9 January 2004 (09.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/438,861

9 January 2003 (09.01.2003)

(71) Applicant (for all designated States except US): CHIL-DREN'S MEDICAL CENTER CORPORATION [US/US]; 55 Shattuck Street, Boston, MA 02115 (US).

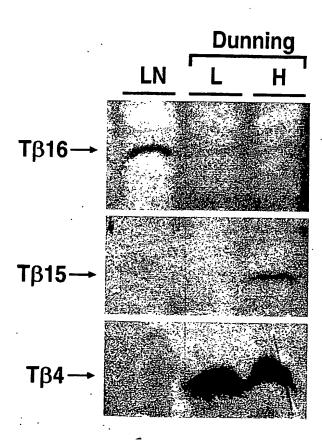
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ZETTER, Bruce

[US/US]; 41 Grove Street, Wayland, MA 01778 (US). HUTCHINSON, Lloyd [US/US]; 69 Fuller Street, Brookline, MA 02446 (US). BAO, Lere [CN/US]; 145 Day Street, Newton, MA 02466 (US).

- (74) Agents: RESNICK, David, S. et al.; Nixon Peabody LLP, 100 Summer Streett, Boston, MA 02110-2131 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: METHODS FOR DIAGNOSIS AND PROGNOSIS OF CANCER



(57) Abstract: We have discovered a protein in humans, herein referred to as thymosin R16 (SEQ ID NO: 1), that is expressed in human prostate cancer tumors but not in specimens of benign prostate hyperplasma (BPH) tissues. In contrast, prostate specific antigen (PSA), the gold standard of prostate cancer diagnosis, is highly expressed in BPH tissues. Increased expression of thymosin (316 has a high correlation to disease state in a number of cancers including prostate cancer and cancers of epithelial origin. Accordingly, method of diagnosing and prognosing cancer in a patient by measuring the level of thymosin (316 in a biological test sample obtained from the patient are provided.



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.